BACHELOR OF PHARMACY HONOURS
FMU5504- PHARMACEUTICAL TECHNOLOGY II - LEVEL 5
FINAL EXAMINATION
DURATION: THREE (03) HOURS

DATE: 07TH OCTOBER 2022 TIME: 9.30 A.M. - 12.30 P.M.

**Part B- Short Answer Questions – SAQs (20 Marks)**

1.

1.1 "When iron get expose to moist air, it reacts with oxygen and form rust". State the overall equation for the above process. (01 mark)

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1.2 Define the following terms.

I. Uniform corrosion (01 mark)

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II. Galvanic corrosion (01 mark)

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1.3 List three (03) factors each associated with metals and the environment that influence corrosion reactions.

Factors associated with the metal. (1.5 marks)

I. .....
II. .....
III. .....

Factors associated with the environment. (1.5 marks)

I. .....
II. .....
III. .....

**Index No: .....**

1.4 Name four (04) methods of preventing corrosion. (04 marks)

I. .....

II. .....

III. .....

IV. .....

2.

2.1 Define the term "pollution". (02 marks)

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2.2 State two (02) parameters that can be used to classify pollutants. (02 marks)

I.....

II.....

2.3 List three (03) air pollution control methods applied in pharmaceutical industries. (03 marks)

I.....

II.....

III.....

2.4 Name three (03) quality indicators of pharmaceutical wastewater. (03 marks)

I.....

II.....

III.....

Index No: .....

**Part C- Structured Essay Questions – SEQs (60 Marks)**

1.

1.1 Define following terms regarding occupational safety and health. (02 marks)

1.1.1. Industrial hazards

1.1.2. Risk assessment

1.2. According to the National Institute for Occupational Safety and Health (NIOSH), list the main categories of risk control methods which applied in controlling hazards (02 marks)

1.3. Giving two (02) examples for each, briefly describe the different types of industrial/ work hazards that can be encountered in a pharmaceutical manufacturing plant. (11 marks)

2.

2.1 Define the term "Biomarker" (03 marks)

2.2 Briefly explain four (04) benefits of nanotechnology in product packaging. (04 marks)

2.3 Discuss four (04) benefits of nanotechnology in drug delivery. (08 marks)

3.

3.1 State the main three (03) stages of the lipsticks manufacturing process. (03 marks)

3.2 List the main four (04) types of ingredients used in the manufacturing of lipsticks, Providing one (01) example for each. (04 marks)

3.3 Describe the term nutraceuticals in relation with cardiovascular health. (08 marks)

4.

4.1 List two (02) characteristics of a good layout of a pharmaceutical manufacturing plant. (02 marks)

4.2 Name the four (04) main types of layouts of a pharmaceutical manufacturing plant. (02 marks)

4.3 Briefly describe the four (04) different types of rubber used during the construction of a pharmaceutical manufacturing plant. (04 marks)

4.4 Briefly explain the effect of chemical factors on the selection of materials for the construction of machines and equipment in a manufacturing plant. (07 marks)